

Claims

1. Analytical test element for determining an analyte in a liquid comprising
 - an inert carrier,
 - an application zone for sample material,
 - a detection zone for determining the analyte, and
 - a channel or gap for transporting liquid from the application zone to the detection zone,**characterized in that**
the test element has a hydrophobic structured surface at least in an area around the application zone.
2. Test element according to claim 1,
characterized in that
the channel or gap has an opening in the area of the application zone and the surface of the test element has hydrophobic structuring at least around the channel opening.
3. Test element according to claim 1 or 2,
characterized in that
the channel or gap is a capillary channel or capillary gap.
4. Test element according to one of the claims 1 to 3,
characterized in that
the interior of the channel or gap has at least partially a hydrophilic surface.

5. Test element according to one of the claims 1 to 4,
characterized in that
the average distance between elevations on the hydrophobic structured surface is in the range of 50 nm to 200 μm and the average height of the elevations is in the range of 50 nm to 100 μm .
6. Test element according to one of the claims 1 to 5,
characterized in that
the hydrophobic surface has a surface energy of $\leq 20 \text{ mN/m}$.
7. Test element according to one of the claims 1 to 6,
characterized in that
the hydrophobic surface has a contact angle with aqueous systems of $\geq 120^\circ$.
8. Test element according to one of the claims 1 to 7,
characterized in that
the hydrophobic surface can be obtained by spraying a suspension of hydrophobic nanoparticles.
9. Test element according to one of the claims 1 to 8,
characterized in that
the hydrophobic surface is immobilized on the test element.
10. Test element according to claim 9,
characterized in that
the hydrophobic surface can be obtained by applying a hardenable substance to the areas of the test element to be coated, applying hydrophobic, hydrophobized or hydrophobizable particles to the coated areas and immobilizing the particles by hardening.

11. Test element according to one of the claims 1 to 10,
characterized in that
it is designed to be held within a magazine.
12. Test element according to claim 11,
characterized in that
the magazine is designed to hold both used and unused test elements.
13. Test element according to claim 11 or 12,
characterized in that
the magazine is located within a measuring device.
14. Test element according to claim 13,
characterized in that
the measuring device is an optical or electronic measuring device.
15. Test element according to one of the claims 1 to 14 for determining glucose
in blood.
16. Magazine for holding test elements for determining an analyte in a liquid
comprising at least one test element according to one of the claims 1 to 15.
17. Magazine according to claim 16,
characterized in that
it is designed to hold both used and unused test elements.
18. Measuring device for determining an analyte in a liquid,
characterized in that
it contains at least one test element according to one of the claims 1 to 15.

19. Measuring device according to claim 18,
characterized in that
it contains at least one magazine for holding one or more test elements.
20. Measuring device according to claim 19,
characterized in that
the magazine is designed to hold both used and unused test elements.
21. Method for the determination of an analyte in a liquid comprising
 - applying a sample liquid to a test element according to one of the claims 1 to 15 and
 - qualitatively or/and quantitatively determining the analyte present in the sample liquid.